



An Energy Efficiency Workshop & Exposition
Palm Springs, California

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and
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Palm Springs, California

United States Courthouse Super ESPC Collaboration

Roger Wright – NW GSA

Robert Rogers – JCI

**Tim Kehrli – DOE/NREL
Subcontractor**



Presentation Outline

- Project Summary – Wright
- New Construction ESPC and Energy Baseline Development – Kehrli
- Prime Contract Integration – Rogers
- Mechanics of Project Development – Rogers/Kehrli
- Questions

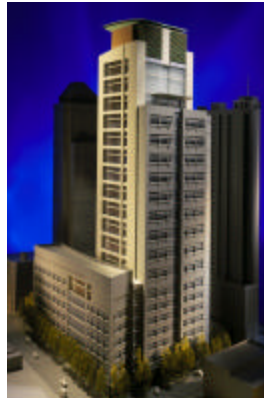
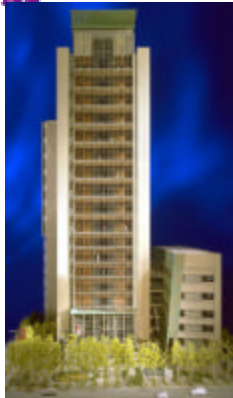
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Seattle, WA Federal Courthouse



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U.S. Courthouse Seattle

- 615,000 square feet
- 20 stories
- Downtown location
- \$150 M construction cost
- Design started in 1998
- Construction started in 2001
- Occupancy anticipated in Spring 2004

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ESPC Specifics

- Contractor Identified Proposal
- Initial Proposal to Award – 6 months
- Investment Amount - \$1.5 Million
- Contract Term – 2 ½ yrs. Construction, 13 years Performance
- Direct Savings to Project - \$1.38 Million
- Additional Project Savings - \$700 K

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Energy Conservation Measures

- Chiller Plant Design Improvements
- Building Automation System Improvements
- Enhanced Lighting Controls
- Variable Frequency Drives

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ESPC Benefits

- Equipment and Control Enhancements reduced btu's/sqft by 20%
- Maintained LEEDS Silver Rating and may warrant upgrade to LEEDS Gold
- Improved quality of proposed equipment that had been specified during value engineering
- Qualified for \$200k utility rebate

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Project Overview

- A/E selected in accordance with Brooks Act
- CM selected through Term Contract
- Specialized CM & Commissioning through GSA National IDIQ Commissioning Contract
- Construction Contractor selected using Best Value Source Selection Competitive Negotiation Method

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Best Value Construction Source Selection Process

- Technical proposals
- Interview of Contractor Team
- Evaluated total cost bid form with incentive award fee and constructability pool
- Selected BEST VALUE Contractor
- Awarded site/foundation

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Best Value Construction Source Selection Process

- Major Value Engineering effort
- ESPC Integrated with VE solutions
- A/E Revised Contract Documents
- Negotiated Final ESPC Contract
- Negotiated Final Construction Price
- Exercised Option for constructing the rest of the Courthouse

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Team Approach The Formula for Success

- Develop strategy that fits the team
- Promote innovation & creativity
- All parties in decision-making loop
- Financial incentive programs
- Select the right individuals for the job
- Be flexible to circumstantial changes
- Bring experiences from past projects
- **BE CUSTOMER FOCUSED!!!**

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New Construction ESPC and Energy Baseline Development

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ESPC in New Construction Process

- Agency authorizes ESCO to propose scope of work
- Agency reviews and issues NOIA for final proposal
- ESCO develops final ECM's, energy and O&M baseline and prime contractor integration plan
- Contract award and work begins

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New Construction Challenges

- Baseline Development – Energy and O&M
- Coordination with Prime Contractor
- Dealing with budget shortfalls
- O&M Budgeting/Financial Impact
- Revisions to design documents
- Project Timeline

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Baseline Issues In-depth

- Energy Baseline Model – DOE 2.1E
- Certification of Energy Efficiency – ASHRAE 90.1, 10 CFR 435-436, UBC, UMC
- O&M Costs
- Non-Recurring Maintenance Costs
- O&M Personnel (Govt. or Contracted)

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Prime Contract Integration

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Prime Contract Integration

***Question - How is a Super
ESPC contract effectively
integrated into a Construction
Contract?***

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Typical Construction Organization

General Contractor
Division 1 (General Requirements) *GC*
retained

Division 2 (Site Construction)
Excavation Contractor
Landscape Contractor

Division 3 (Concrete Contractor)

Division 4 (Masonry Contractor)

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Typical Construction Organization (cont.)

Division 14 (Conveying Systems Contractor)

Division 15 (Mechanical Contractor)
Ducting Contractor
Boiler Contractor
Chiller Contractor
Fire Protection Controls
Building Automation System Contractor
Variable Frequency Drive Contractor

Division 16 (Electrical Contractor)
Engine Generator Contractor
Lighting Contractor
Telco Contractor
Structured Cable Contractor
Lighting Controls Contractor

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U.S. Courthouse Seattle Construction Organization

General Contractor J.A. Jones/Absure
Division 1 (General Requirements) GC retained

Division 15 (Mechanical Contractor) W.A. Botting

Ducting Contractor	Holiday Parks
Boiler Vendor	Lochenvar
Chiller Vendor	Trane
Fire Protection Controls	
Building Automation System Contractor	JCI & JCI
Variable Frequency Drive Vendor	Graham

Division 16 (Electrical Contractor) Valley Electric

Engine Generator Contractor	
Lighting Contractor	
Telco Contractor	
Structured Cable Contractor	
Lighting Controls Contractor	JCI & JCI

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General Services Administration

General Contractor **ESCO**
(Energy Service Company)

Mechanical & Electrical **JCI – ESCO (\$1.5 million)**
Sub contractor

JCI – Controls Contractor
(\$0.9 million)

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Mechanics of Project Development

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Super ESPC Timeline for U.S. Courthouse Seattle

Request for Proposal	6/20/2001
Proposal Presentation	6/27/2001
Initial Proposal	7/7/2001
Detailed Energy Study	7/25/2001 – 9/7/2001
Final Proposal	10/25/2001
Award	11/27/2001

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Leverage, Controls and Empowerment

	Plan & Spec	EPSC
Contractual	W.A. Botting Jones/Absure	GSA
Coordination	W.A. Botting & Jones Absure	GSA
Warranty	1 year	13 years
Quality Criteria	Spec	Performance

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QUESTIONS?



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